## LaserGas™ iQ<sup>2</sup>Vulcan





NEO Monitors' LaserGas<sup>™</sup> iQ<sup>2</sup> Vulcan is the first in-situ single-flange solution to measure up to four gases (O<sub>2</sub>, CO, CH<sub>4</sub>, H<sub>2</sub>O) as well as the process temperature in a single unit. Based on the well-proven and trusted tunable diode laser absorption spectroscopy (TDLAS) technology, the solution combines cutting-edge design and ground-breaking functionality. It is a complete combustion solution eliminating the need for multiple units. Advanced TDLAS technology enables unmatched reliability and durability. Installation costs of this all-in-one solution are significantly reduced since only one flange is needed. In addition, operational and maintenance costs are kept at a minimum.

Features	Applications	Customer benefits
<ul> <li>No interference from background gases</li> <li>Factory calibrated</li> <li>No zero drift</li> <li>Transceiver configuration</li> <li>Automatic gain</li> <li>In-situ measurement</li> <li>Span check/validation option for O<sub>2</sub>, CO, and CH<sub>4</sub></li> </ul>	<ul> <li>Combustion analysis</li> <li>Package boilers</li> <li>Process heaters</li> <li>Electrostatic precipitators</li> <li>VCM waste gas recovery</li> <li>Reformer gas</li> </ul>	<ul> <li>Up to 5 measuring components O<sub>2</sub>, CO, CH<sub>4</sub>, H<sub>2</sub>O and temperature</li> <li>Can handle a typical combustion process up to 1562 °F/850°C</li> <li>Reduced installation cost</li> <li>Low maintenance costs</li> <li>Easy to install transceiver, one unit ensures easy alignment</li> <li>Double path length increases absorption signal for low concentration</li> <li>Well-proven technology</li> </ul>

## LaserGas<sup>™</sup> iQ<sup>2</sup>Vulcan

## Technical Data

Specifications       Ratings       Numerications       Power supply:       24 VDC (18 - 30 VDC)       Installation and operations       DN80/PN 10-40         Max. process gas pressure: $350^{\circ}$ C $50^{\circ}$ C $350^{\circ}$ C $350^{\circ}$ C $350^{\circ}$ C $350^{\circ}$ C $350^{\circ}$ C $300^{\circ}$ C						
gas pressure:1.5 BarA1.6 DifferDoe of Minick IsolatedANSI 4" #150/#300Optical path length:1 mRelay output:1 A at 30 V DC/ACANSI 4" #150/#300Response time:5 scSafetyLaser class:Class 1M according to IEC 60825-1, eye safeInstrument purge:NitrogenEnvironmental condition:-40 °C to +55 °CCertifiedInstrument vith directive 2014/30/EUProbe purge:NitrogenProtection classification:Pfe6ApprovalsConformant with directive 2014/30/EUCalibration check:Every 12 monthsInput/outputIP66ApprovalsII 2 G Ex pxb IIIC To GbDimensions / weight 15 kgDimensions / weight 15 kgDimensions / weight 15 kgIngital output:Ethernet (TCP/IP)CSA:Class I Div. 2Probe:Hap5,8 mm x Ø 63,5 mm x Ø 63,5 mm 32 kgRelay output (6):High gas, warning and fault (normality closed)Connection box:II 2 G Ex e II CT5 Gb 40 °C < Ta < 65 °C	Max. process	50 °C	Power supply:	``````````````````````````````````````		DN80/PN 10-40
SafetySafetyInstrument purge:NitrogenResponse time:5 secLaser class:Class 1M according to IEC 60825-1, eye safeInstrument purge:NitrogenEnvironmental condition:-40 °C to +55 °CCE:CertifiedProbe purge:NitrogenOperating temperature:-40 °C to +70 °CEMC:Conformant with directive 2014/30/EUCalibration check:Every 12 monthsProtection classification:IP66ApprovalsII 2 G Ex pxb IIC T5 Gb 		5 BarA				
Response time:5 secLaser class:Class 1M according to IEC 60825-1, eye safeInstrument purge:NitrogenEnvironmental condition: $40^{\circ}$ C to +55°CCE:CertifiedProbe purge:NitrogenOperating temperature: $40^{\circ}$ C to +55°CEMC:Conformant with directive 2014/30/EUCalibration check:Forey 12 monthsProtection classification:IP6ApprovalsII 2 G Ex pxb IIIC 50Dimensions / weight (2):ApprovalsII 2 D Ex pxb IIIC 50Affirm x 399 mm x (2):Digital output:Ether (TCP/IP)CSA:Class I Div. 2Probe:Haps, samm x Ø 63,5 m ac Ø concertor box:ApprovalsII 2 G Ex px B IIC 50 G Concertor box:Approvals	Optical path length: 1 r	m	Safety			
Environmental conditionsCE:CertifiedProbe purge:NitrogenOperating temperature:-40 °C to +55 °CEMC:CertifiedCalibration check:Every 12 monthsStorage temperature:-40 °C to +70 °CProtection classification:IP66ApprovalsII 2 G Ex pxb IIC T5 GbCalibration check:Every 12 monthsInput/output4 - 20 mA current loopII 2 D Ex pxb IIC T100 °C DbII 2 D Ex pxb IIC T100 °C DbDimensions / weight 15 kg461 mm x 399 mm x 174 mm 15 kgDigital output (6):4 - 20 mA current loopCSA:Class I Div. 2Probe:1495,8 mm x Ø 63,5 mm 32 kgRelay output (6):High gas, warning and fault (normally closed)Connection box:Connection box:Frobe:Lass 65 °CAnalog input (2):4 - 20 mA Process temperature andATEX:II 2 GD Ex e IIC T5 Gb - 40 °C < Ta < 65 °C	Response time: 5 s	sec		to IEC 60825-1,		0
Storage temperature:-40 °C to +70 °CEMC:Conformant with directive 2014/30/EUCalibration check:Every 12 monthsProtection classification:IP66Approvals IECEX/ATEX zone 1:II 2 G Ex pxb IIC T5 Gb T100 °C DbDimensions / weight iQ2:Dimensions / weight iQ2:A61 mm x 399 mm x 174 mm 15 kgInput/output4 - 20 mA current loopII 2 D Ex pxb IIIC T100 °C DbII 2 D Ex pxb IIIC T100 °C DbHigh gas, warning and fault (normally closed)CSA:Class I Div. 2Probe:1495,8 mm x Ø 63,5 mm 32 kgAnalog input (2):4 - 20 mA Process temperature andATEX:II 2 GD Ex e IIC T5 Gb -40 °C < Ta < 65 °C	<b>Environmental conditions</b>		CE:	, ,	Probe purge:	Nitrogen
Storage temperature.IP66ApprovalsIECE x/ATEX zone 1:II 2 G Ex pxb IIC T5 GbDimensions / weight iQ2:Dimensions / weight iQ2:A61 mm x 399 mm x 174 mm 	Operating temperatures: -	-40 °C to +55 °C	EMC:	Conformant with		
Approvals     Iz G Ex pxb IIC T5 Gb     Dimensions / weight iQ <sup>2</sup> :     A61 mm x 399 mm x 174 mm 15 kg       Input/output     4 - 20 mA current loop     II 2 D Ex pxb IIIC T100 °C Db     Probe:     1495,8 mm x Ø 63,5 mm 32 kg       Digital output (6):     High gas, warning and fault (normally closed)     Connection box:     Frobe:     1495,8 mm x Ø 63,5 mm 32 kg       Analog input (2):     4 - 20 mA Process temperature and     ATEX:     II 2 GD Ex e IIC T5 Gb -40 °C < Ta < 65 °C	Storage temperature: -	-40 °C to +70 °C			Calibration check:	Every 12 months
Input/outputImput/outputImput/outputImput/outputImput/outputAnalog output(6):4 - 20 mA current loopII 2 D Ex pxb IIIC T100 °C Db15 kgDigital output:Ethernet (TCP/IP)CSA:Class I Div. 2Probe:1495,8 mm x Ø 63,5 mm 32 kgRelay output (6):High gas, warning and fault (normally closed)Connection box:mm s2 kg32 kgAnalog input (2):4 - 20 mA Process temperature andATEX:II 2 GD Ex e IIC T5 Gb -40 °C < Ta < 65 °C	Protection classification:	P66		ll 2 G Ex pxb llC T5 Gb		461 mm x 200 mm x
Analog output(d).4 + 20 HA current loopTion of Db15 kgDigital output:Ethernet (TCP/IP)CSA:Class I Div. 2Probe:1495,8 mm x Ø 63,5 mm mm 32 kgRelay output (6):High gas, warning and fault (normally closed)Connection box:mm 32 kg32 kgAnalog input (2):4 - 20 mA Process temperature andATEX:II 2 GD Ex e IIC T5 Gb -40 °C < Ta < 65 °C				II 2 D Ex pxb IIIC	IQ	
Relay output (6):     High gas, warning and fault (normally closed)     CSA:     Class I Div. 2     Probe:     1495,8 mm x Ø 63,5 mm 32 kg       Analog input (2):     4 - 20 mA Process temperature and     ATEX:     II 2 GD Ex e IIC T5 Gb -40 °C ≤ Ta ≤ 65 °C     II 2 GD Ex e IIC T5 Gb -40 °C ≤ Ta ≤ 65 °C						15 kg
Analog input (2):     4 - 20 mA Process temperature and     ATEX:     II 2 GD Ex e IIC T5 Gb -40 °C ≤ Ta ≤ 65 °C     32 kg	Digital output: Ether	rnet (TCP/IP)	CSA:	Class I Div. 2	Probe:	1495,8 mm x Ø 63,5
Analog input (2): $4 - 20$ mA process that $-40 \degree C \le Ta \le 65 \degree C$	and f	ault (normally	Connection box:			
	temp	erature and	ATEX:			

Component	Max	LDL
СО	10000 ppm	3 ppm
02	25 %	0.05 %
CH4 add-on	5 %	0.01 %
Process tempera- ture	850 °C	
Process pressure	1.5 BarA	

NOTE: Detection limits are specified as the 95 % confidence interval for 1 m optical path and gas temperature / pressure = 25 °C / 1 BarA. Measured in  $N_2$ .

NEO Monitors reserves the right to change specifications without prior notice.

Your local distributor:

